

## Development of the Indian Gender Role Identity Scale

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The paper reports the preparation of the Indian Gender Role Identity Scale (IGRIS) to assess psychological masculinity and femininity in our culture. Review of literature reveals that while scales for assessing Gender Role Identity are available in the West, no such scale has been prepared in India taking into account the rigorous methodological procedure recommended for such scale. At the same time there are ample evidences that use of items in one culture are likely to be invalid in a different culture, since the meaning of masculinity and femininity differs widely across cultures. In the present scale the methodology followed by Sandra Bem was roughly followed, accommodating for the major critiques of Bem's scale. At various phases it utilized 2486 subjects between the age range of 16 to 50 years of age, among which 1240 were female and 1246 male. The final scale consists of 30 items to be judged on a 7 point scale to describe oneself. The item validity, construct validity, reliability and working norm are provided.

**Keywords :** Masculinity, Femininity, Indian Gender Role Identity Scale

**T**he present paper purports to prepare and validate a Gender Role Identity scale applicable in India. According to Unger (1979) "The term gender may be used to describe those non-physiological components of sex that are culturally regarded as appropriate to males and females" (p.108). Gender in its psychological sense is a multi-component construct, its reflections being palpable on various traits, roles and attitudes. Archer (1980) differentiated between gender role and gender trait stereotype, the former being concerned with behavior and the latter with anchoring traits for individual's personality description. Whether these two, that is gendered trait and gendered role enactment are correlated, is a controversial issue (Deaux and Lewis, 1984; Biernat, 1991). In the present paper we are concerned only with gender trait stereotype as reflected in one's self - description. This description of oneself in terms of gender specific traits forms a part of one's identity (Broverman et al, 1972), and

have been conceptualized for the present purpose as Gender Role Identity.

Gender role identity has two components, namely Masculinity (M) and Femininity (F). While early literature used these two terms 'sex' and 'gender' interchangeably, from the late 1930s, femininity and masculinity had come to be recognized as significant dimensions of personality rather than as given but invisible properties of biological maleness and femaleness (i.e. as psychological processes within, as different from appearance only). Masculinity however was traditionally defined as what men usually are / do, and femininity as what women usually are/ do.

The early conceptualization of gender role identity was based on two assumptions: (1) masculinity for men and femininity for women is normative, and (2) femininity and masculinity are mutually exclusive. Terman and Miles (1936) developed a multi-component self rating M-F scale that included

those items which best discriminate women from men. The same logic was used in a number of subsequent scale developments, like the MMPI, Strong Vocational Interest Blank, California Personality Inventory etc.

Constantinople's now classic paper in 1973 challenged the very assumption of unidimensionality of gender role identity. According to her, masculinity and femininity are not contrary, but co-existent. This was an epochal concept so far as it was the first step to recognize the complexity of psychological variations in gender construct. It was greeted by the feminists of the day and reflected in subsequent tool development (Bem, 1974; Spence et al., 1975; Heilbrun, 1976). Constantinople raised a second point stating "Given these data, however, one would also be forced to ask whether M-F is a true personality variable with some relationship to biological sex as is usually assumed" (pp. 405). In other words she questioned the very connection between biological sex and psychological gender, a point debated over repeatedly in the following years.

Subsequent research was headed by two American psychologists, Bem & Spence, in two slightly different veins (Bem, 1984; Spence & Helmreich, 1978). In their concepts, masculinity and femininity were two orthogonal constructs. The concept of androgyny gained prominence. The androgynous individual is one who does not rely on sex typing as a cognitive organizing principle and who incorporates in one's personality a combination of both masculine and feminine characteristics. Despite their differences in dealing with social desirability factors and criteria for defining an item as M or F, both Bem and Spence dominated gender role research for almost one and a half decades. The relative contribution of masculinity, femininity and androgyny in various domains of behavior, particularly mental health, accumulated. Broadly speaking, while Bem originally thought that androgynous people demonstrated better

mental health it gradually emerged that it was masculinity in both females and males that promoted greater wellness (Cook, 1985). A detailed critique and comparison of these two approaches has been done by a number of psychologists including the present author (Archer, 1989; McCreary, 1990; Basu, 1993).

Among the various critiques of these categories of scales one major criticism is about the cross cultural application of these instruments. This is a highly controversial issue, since some studies emphasize the universal and cross cultural nature of gender role identity, while others highlight its specificity. Keeping the cross-cultural perspective of gender in mind Williams and Best (1990) attempted to prepare a scale applicable for a multination study. They observed sufficient pan-cultural similarity to conclude that there was little evidence that the average masculinity / femininity measures were related to cultural variation. Contrarily, a number of available literature abroad and in India claimed that such trait name descriptions are highly culture specific and those used in the West are not applicable in the Eastern countries (Sugihara & Katsurada, 1999), and in India (Sethi & Allen, 1984; Fakir & Sahoo, 1990; Basu et al., 1995). In this context it is further important to recall that Williams and Best used University students from all countries which owing to the educational and age bracketing may have yielded considerable similarity in conceptualizing femininity and masculinity. However there remains the possibility recognized by Williams and Best (1990) that even within a single nation, variations across age and cultural groups may be significant than between nation groups. Particularly important here is the issue of age difference, since the notion of gender alters in sensitive ways across generations (Ramirez & Mendoza, 1984; Pulkkinen, 1996).

In the present paper the nature of feminine and masculine gender role identity has been explored in the context of Indian culture by way of development of an

indigenous scale. Since no such culture specific scale exists in this domain, the preparation of such a scale for scientific research in this area seems imperative. The trait description technique followed by Broverman et al., Bem and Spence et al. has been adopted. This scale should attempt to capture both the universal and age-specific aspects of masculine and feminine role identity.

### ***Construction of the Scale***

Theoretical rationale for selection of items: A number of earlier studies have employed different methods for obtaining and selecting items. This method has influence on the validity and use of the scales concerned. For example, Broverman et al., (1972) asked college students to list behaviors, attitude, and personality characteristics they considered to differentiate women and men; all items listed by more than one student were included. Thus it was highly inclusive of traits. Spence et al. (1975) selected items based on whether they are rated as socially desirable for both women and men to possess, but are perceived as stereotypic for either of them. Bem (1974) obtained items by asking individuals to rate the desirability of traits for one sex over the other. Here some traits were negatively valenced for one sex.

Among these procedures .the present study draws strongly upon Sandra Bem's approach to the construction of the scale. Bem's scale and method however has been harshly criticized for a number of reasons. In this section the major criticisms would be delineated and the modifications adopted or justification erected would be presented.

One major criticism against Bem's approach concerns the nature of masculinity and femininity as revealed in Bem's scale. The masculinity items, for example, were obtained by asking individuals to state whether the item concerned was desirable in the given culture for a man over a woman. Later analyses however demonstrated that the femininity or

masculinity items thus obtained were not one-dimensional (Ruch, 1984; Wilson and Cook, 1984). Furthermore, McCreary (1990) contends that the negative connotation of some items in one's sex diminishes its applicability for the androgyny concept. Some studies have questioned the construct and divergent validity of the scale as well ( Taylor and Hall, 1982); however these are not very consistent criticisms.

Despite these criticisms, in the present scale construction Bem's procedure was preferred over others. Broverman's approach seemed to be too inclusive. Williams and Bennett's approach was of course optimally differentiating, but it judged the nature of perceived frequency, and not the desirability. Spence et al.'s approach also was similarly based on perceived stereotypy. Bem's instructions however were to judge desirability, which tapped the 'ideal' condition as opposed to existing condition. Thus the value judgment associated with stereotyping process was covered in this approach. However the present author agreed that the inclusion of negatively valenced items for one sex was detrimental to the meaning of the scale items. Therefore only those items which were considered desirable to a certain extent by both sexes for both sexes were taken. This procedure sacrificed the inclusiveness of the scale by imposing more stringent criteria, but ensured the ideal trait representation of the stereotype for womanhood and manhood.

The unidimensionality issue is also a serious criticism. However the critiques presumed that femininity or masculinity is by definition an one-dimensional condition. The present author however opines that the very nature of gender, characterized by its multifaceted and situational variations may be a multidimensional concept and this should be explored rather than forcibly reduced to unidimensionality.

There is a third criticism applicable more or less to all the scales discussed here. The

items obtained by judging others are ultimately applied judging oneself. There have been ample evidences that the psychological process for judging others is different from the process of judging the self (Higgins & Bargh, 1987; Markus & Wurf, 1987). At the same time there remains the contrasting document that specific social stereotype influences behavior as well as judgment of oneself (Rosenthal, 1987; Jamieson et al., 1987). The present author opines that this limitation and connotation of the dynamicity involved in this transformation of judging others to judging oneself need not inhibit the construction of such scales, but should be kept in consideration while attempting to interpret the results.

### Method

#### **Sample:**

The sample of the study covered a large age range. At various phases it utilized 2486 subjects between the age range of 16 to 50 years of age, among which 1240 were female and 1246 male. They belonged to middle class and have passed at least the school leaving examination. This was ensured to enable the subjects to read and understand the meaning of the trait names used. All subjects were Bengali Hindu and have been residing in the city of Kolkata for at least 5 years. Among these 60% were students at various levels. Among the men who were not students (approximately 20% of the total sample) all were working, among women who were not students (approximately 20% of the total sample) about half were working and the rest housewives. Approximately 45% of them were married.

#### **The selection of items:**

A total pool of 200 items were collected from various sources, like the original items of Broverman et al., Williams and Best, Bem and Spence et al., and some other studies in Asia and India in particular (Ward & Sethi, 1986; Fakir & Sahoo, 1990), as well as from

an open ended survey by the author (Basu, 1991). Five linguists and 5 psychologists (3 social psychologists, 2 clinical psychologists and 1 psychometrician) judged those initial items for relevance, understandability and duplication and overlap in connotation, resulting in 135 items to be judged. These were translated in Bengali and then given to 120 female and 120 male subjects for assessing on a 5 point scale the degree of difficulty in understanding. Those items, which were, rated below category 3 by more than 10 subjects were omitted, thus resulting in 124 initial items.

**Judgment of the items for inclusion in the scale:** A total of 1010 subjects (500 female and 510 male) rated each item on a 7 point scale for being considered desirable in a woman or in a man in Indian society. Bem's (1984) procedure was roughly followed with some modification for the construction of the scale, whereby each judge rated the items on a 7 point scale in terms of its desirability in a man (or a woman) within the Indian culture. A personality characteristic was considered as feminine or masculine if it was judged to be significantly more desirable for one sex or the other in the context of contemporary Indian society. Half of the judges rated the traits for desirability in women, and half for men. No judge rated both.

**Statistical treatment of data and construction of the scale:** The mean rating for each item was done. The significance of differences between desirability for women and men was tested by 'z' test separately for the female and the male subjects. Since these items were intended to reflect cultural stereotype only those items which were desirable ( $p < 0.05$ ) for one sex over the other by both female and male subjects were considered as 'feminine' or 'masculine'. Those items reflecting no significant difference ( $p > 0.20$ ) in terms of desirability for women and men by both female and male subjects were labeled as neutral items and used as buffers.

Bem (1974) originally retained items which satisfied the criterion of significant differences only. Thus the scale included items which by themselves may not be very desirable, as their mean rating fell below 4, the midpoint of the scale. This approach has been criticized by others (Silvern & Ryan, 1979). Recognizing this criticism only those items which had a mean desirability rating above 4 for at least one sex were included.

It was found that only 50 items were thus selected, among them only 10 feminine, 15 masculine and 25 neutral. Thus definitely feminine items were the most elusive. Since psychometrically, it was preferable to have equal number of female and male items, a random selection of 10 masculine and 10 neutral items was done. Thus the scale consisted of 30 items only. These items are presented in Table 1.

**Table1: The Items for the Masculinity, Femininity and Neutral Categories of IGRIS**

Masculine	Feminine	Neutral
1.Active	Affectionate	Adaptive
2.Adventurous	Domestic	Disciplinarian
3.Ambitious	Easily expresses tender emotion	Flexible
4.Athletic	Feminine	Friendly
5.Courageous	Graceful	Generous
6.Hard working	Nice	Happy
7.Independent	Quiet	Helpful
8.Masculine	Submissive	Pleasant
9.Powerful	Sympathetic	Reserved
10.Strong personality	Understanding	Tender

The mean masculinity and mean femininity scale values as rated by female and male judges and the 'z' ratios indicating the significance of their differences are presented in Tables 2 and 3.

**Table 2: Mean desirability ratings and SD for the masculinity and femininity scales by female judges (N=500) and 'z' ratios indicating the significance of mean differences**

	For Women (judged by 250 female judges)		For Men (judged by 250 female judges)		
	Mean	SD	Mean	SD	'z' ratio
Masculinity Scale	4.48	0.60	5.53	0.68	-18.31**
Femininity Scale	5.55	0.62	4.34	0.70	20.46**

\*\* p<0.01

**Table 3: Mean desirability ratings and SD for the masculinity and femininity scales by male judges (N = 510) and 'z' ratios indicating the significance of mean differences**

	For Women (judged by 255 male judges)		For Men (judged by 255 male judges)		
	Mean	SD	Mean	SD	'z' ratios
Masculinity Scale	4.34	0.66	5.45	0.67	-18.85**
Femininity Scale	5.21	0.69	4.11	0.70	17.87**

\*\*p<0.01

The tables indicate that the mean desirability of the masculinity scale was greater for men than for women. The mean desirability of the femininity scale was greater for women than for men. This is true when

judged by females as well as by males.

The overall mean desirability rating for the masculinity and the femininity scales summed over the judges and targets are presented below in Table 4.

**Table 4: Mean desirability ratings and SD for the masculinity and femininity scales by all judges (N=1010) and ‘z’ ratios indicating the significance of mean differences**

	Masculinity Scale (judged by 505 judges)	Femininity Scale (judged by 505 judges)
Mean	4.95	4.80
SD	0.65	0.68
Z ratio	3.58**	

\*p<0.05

The above tables indicate that the mean femininity rating was somewhat lower than the mean masculinity rating. Some authors, have suggested that the mean rating of the desirability values of the two scales should be made equal (Silvern & Ryan, 1979). Others however opined that if such differences in desirability reflect cultural stereotype, they should not be tampered with (Taylor & Hall, 1982). The present investigator agreed with the second line of thinking particularly since the same pattern was observed by male and female judges alike.

**Preparing the workable form of the test**

The 30 items were cyclically arranged in the form of a scale with 7 response categories for each item. This was used to assess the extent to which the culture’s definitions of masculinity and femininity are incorporated within the individual’s self- definition. The respondent was asked to rate on a 7 point scale the extent to which the given traits existed in her / him.

**Determining the item Validity**

Then this scale was presented to 320 female and 316 male subjects for self- rating, that is the subjects this time rated the presence of each of these thirty traits in themselves. The item total correlation coefficients were calculated for item analysis. It was found that none of the masculine items correlated significantly with femininity scale total although each of them correlated significantly with

masculinity scale total. The same was found for feminine items. The results are presented in Table 5.

**Table 5: Item-total correlation coefficients for the masculinity and the femininity scales for the total sample (N=636)**

Item No.	Femininity Scale items		Masculinity Scale items	
	r with total F score	r with total M score	r with total F score	r with total M score
1.	0.48	0.02	0.02	0.55
2.	0.65	0.05	0.03	0.65
3.	0.67	0.03	0.05	0.69
4.	0.54	0.04	0.06	0.48
5.	0.73	0.05	0.04	0.66
6.	0.57	0.02	0.04	0.65
7.	0.49	0.01	0.08	0.75
8.	0.56	0.04	0.03	0.64
9.	0.65	0.04	0.03	0.66
10.	0.58	0.06	0.05	0.62

\*p< 0.05    \*\*p < 0.01

**Determining the reliability**

Subsequently, reliability was calculated by administering the scale to another 300 female and 300 male subjects. The Internal consistency reliability was calculated by computing split half reliability using Spearman - Brown formula, and by Chronbach’s alpha. Test retest reliability was calculated by using 300 subjects among the above who were retested after 1 month. The results were satisfactory. The results are presented in Table 6. It may be observed from the table that both scales are highly reliable.

**Table 6: Reliability coefficients for the masculinity and the femininity scales (N=600)**

Type of reliability	Internal Consistency	Test retest
	Split half	Chronbach’s Alpha (After 1 month)
Masculinity	0.90	0.89
Femininity	0.85	0.79

p<0.01

### ***Determining the construct validity***

Bem's conceptualization required that the masculinity and femininity scales be independent. The inter-correlation between the masculinity and femininity scales was found to be 0.03. Thus the independence of the two measures was established. The scale was named the Indian Gender Role Identity Scale

(IGRIS).

### ***The Working Norm***

The test was again administered to 100 women and 100 men of the same characteristics. The mean and standard deviations for the women, men and the total pool of subjects are presented below in Table 7.

**Table 7: Mean and SD of masculinity and femininity scales for women, men and total sample and z values showing significance of gender differences**

Sample	Women(N=100)		Men(N=100)		Z
	Mean	SD	Mean	SD	
Masculinity	47.55	8.61	56.69	9.64	-5.44**
Femininity	53.37	9.68	45.68	10.64	5.30**

\*\*p<.01

Table 7 also reveals the significance of the mean differences of the masculinity and femininity scores between the two genders.

### **Discussion**

In the interpretation of the F and M scores the exact implication of the scale(s) as derived from the instruction and validation procedure needs to be taken into account. It is important to remember that for all these scales the 'desirable' is represented in terms of 'what is perceived in oneself'. To understand the meaning of F or M as derived from the IGRIS scales the basic psychological process involved in transposing stereotypes to self-concept should be kept in mind. Observers of the psychosocial process involved in this transformation have noted that usually people have a tendency to rate oneself as higher in socially valued traits (Messick et al., 1985). Indeed this is what justifies our inclusion of only those traits which are at least moderately desirable in both sexes. Otherwise there remains the possibility that these traits would be rejected not only for being associated with the other sex, but also because they are generally unacceptable within one's self image. Thus conceptualizing oneself in terms

of given traits is understandably dependent on the social weightage given to that trait, and also on the relation between the society and the individual. There are however situations, particularly in the context of gender where a trait is desirable in one context and role, but not in another. In such cases, the willingness to recognize the trait in oneself would be proportional to the subjects' adherence to the said role. For example a woman who depreciates the feminine role prescribed in a culture, and thereby adheres to some different value pattern prevalent in some other group, would probably perceive less of the typical stereotyped elements in oneself. Thus the scores of a single individual may be said to represent an index of the person's alliance to the standard gender role prevalent in the society.

It is however notable in this context that when an individual is asked to rate oneself on the given traits she or he is not aware of the fact that these traits are derived from feminine or masculine stereotypes. Therefore, the reflection of this person's adherence to the gender stereotype is essentially a nonconscious process reflecting the preexisting schema in that person (Fiske and Taylor, 1991) developed through the life long

series of experiences. Indeed, the difference in desirability and self rating values of BSRI has been a continuing source of theoretical debate (Choi et al., 2008).

The essence of Bem's and Spence et al.'s work was the establishment of the concept of androgyny and demonstrating its effect on behavior. The IGRIS can also be used for similar purposes. However, the concept of androgyny has received its own criticism and has its own limitations (Lott, 1981). The present author feels that the use of F and M scores as continuous variables working as parallel or interactive, as is required by the specific design of the study, yields more meaningful results.

The present study may claim to offer a much needed scale for those researching in the area of gender. In this context it is also necessary to keep in perspective the applicative value of the scale. In the Western literature it has been demonstrated that these constructs are associated with mental health issues as well as to other aspects of behavior like interpersonal style, job preference and success etc. Indeed a number of early studies have demonstrated that appropriate sex typing is correlated with high self esteem and adjustment (Ying, 1992). Contrarily others have observed that sex typed individuals have poor mental health (McCreary et al., 1996). Androgyny has been found to be associated with positive mental health by a number of early workers (Bem, 1974; Spence & Helmreich, 1978) Later studies however demonstrated superiority of masculinity in identity (Cook, 1985; Lobel et al., 1996).

Studies in our culture are scanty in this regard. A few available indications have demonstrated that there may be culture specificity to these effects and in Indian context the results of the West may not be exactly replicated (Basu, 1995). It has also been demonstrated that in fields other than in mental health, for example in job preference and

academic achievement the gender role identity constructs operate in interaction with sex and culture (Basu & Chakroborty, 1996; Dasgupta & Basu, 1997). Adequate research involving careful control may elicit the utilization of the scale as significant predictors of various aspects of behavior and may be used as corollary to diagnostic tools in clinical and social domains.

However the author is conscious of the small amount of research done as yet with it, and that modification and addition to this scale is strongly needed for its perfection. The special issue of contention that might arise from its use is the universality vs. age specificity of feminine and masculine role identity. This issue is likely to be contested from both theoretical and application grounds.

An important limitation of the present report is that the working norm was conducted on a relatively small sample, particularly for the IGRIS, and is likely to be changed with further incoming data. At the present moment it is advisable that the researcher should develop her own norm for the same. The test needs to be administered on a larger sample of data taking into account various age groups and socio-economic strata. It also requires to be revalidated employing various validation procedures including understanding of its factor structure.

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